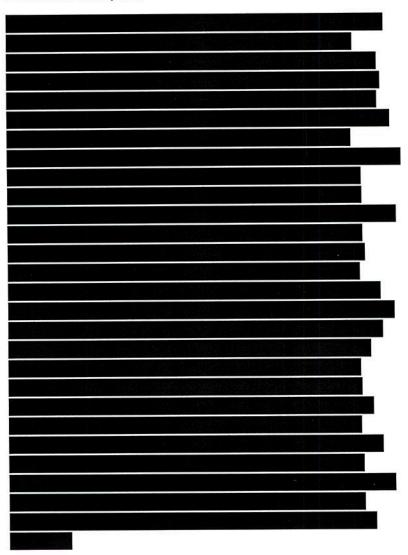
## **Draft December 2014 Transcript**

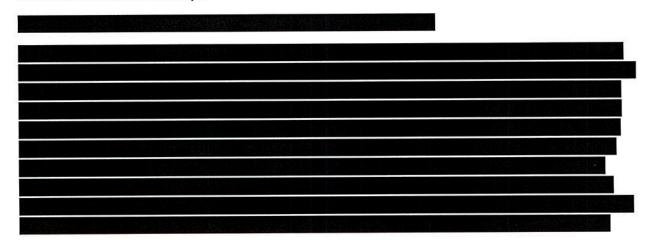
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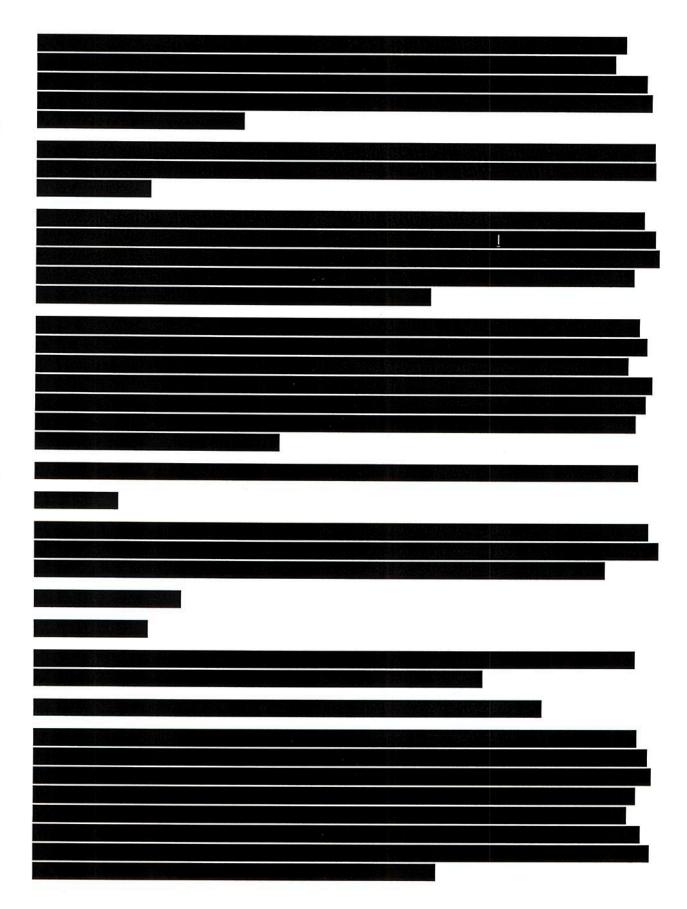
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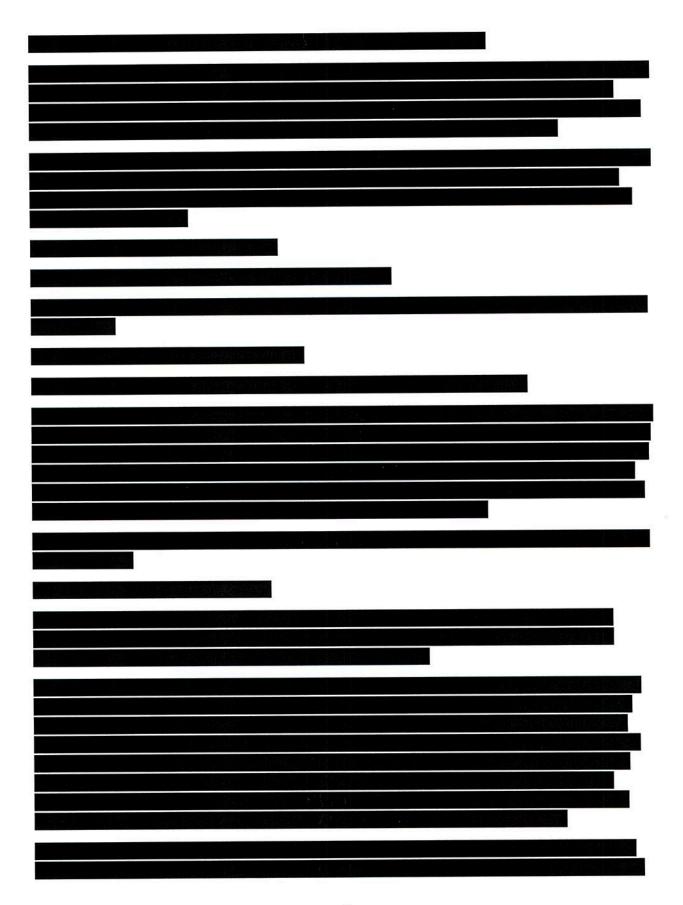


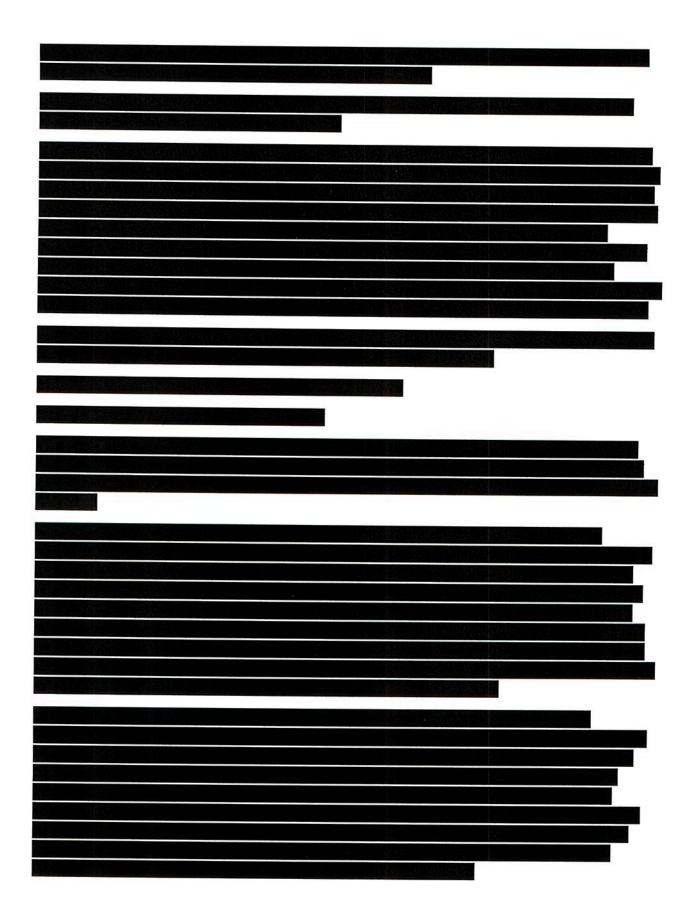


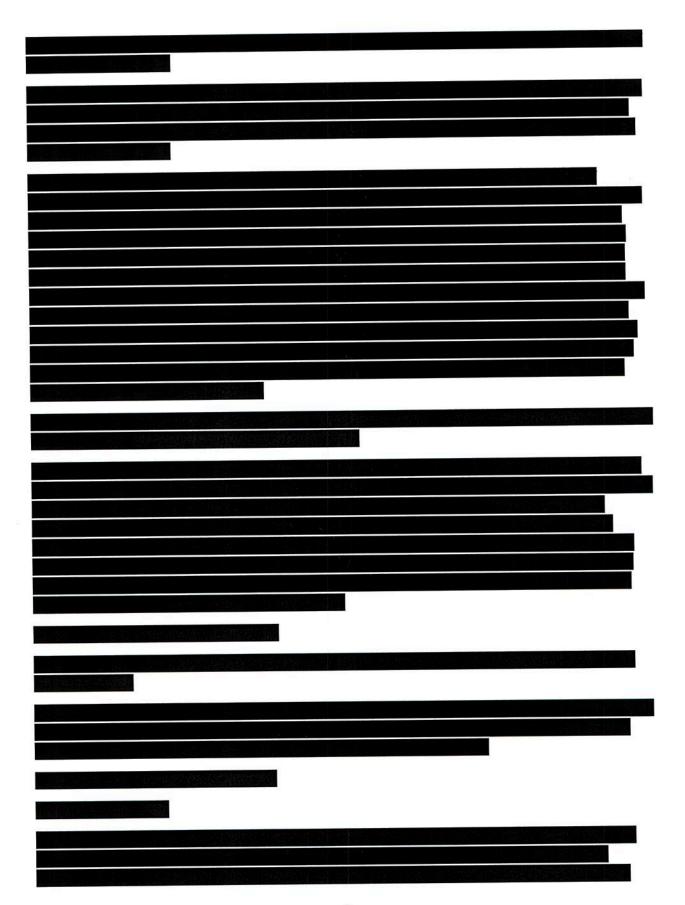
## December 2014 RIN Transcript















Topic: Manufacturing Unit Exemption for Desulfurization Canisters (Delaware)

Delaware. We have a facility in Delaware that operates fuel cells converting natural gas into electricity. What they do is purchase natural gas from the pipeline, which then goes into the fuel cell. In the natural gas purchased from the pipeline there's naturally occurring sulfur and then there's sulfur that's added by the natural gas utility. The natural gas utility adds mercaptans to odorize the natural gas for safety reasons (i.e., so you can smell it if there's a leak). The sulfur in the natural gas actually causes the catalyst in the fuel cells to fail so what the company has decided to do is they have these desulfurization canisters that they put in before the fuel cell.

The canister basically contains activated carbon, some metal oxides and zeolites and causes the sulfur to adsorb to the filter media. It also picks up some metals, VOCs and some moisture. When it can no longer effectively capture the sulfur, they remove the desulfurization canister from the fuel cell module and arrange for it to be shipped to Texas.

Once it gets to the facility in Texas part of the material in the canister is managed as hazardous waste; part of it is reclaimed.

So we started asking some questions and the facility has come back and told us they believe it meets the definition of a manufacturing process unit. We've done a little research. I personally don't believe it meets the definition of a manufacturing process unit. There's no manufacturing occurring in the desulfurization canister itself. There's not a raw material in the desulfurization canister. There's not a product in the desulfurization canister.

We've also found some guidance from EPA on heat exchangers that basically says if you remove the device from the manufacturing process it no longer qualifies for the manufacturing process unit

exemption. So our thought is that it is being removed and there's no manufacturing, we don't believe it meets the exemption for the manufacturing process unit, but we wanted to get some thoughts from other states out there on how if they've seen this, how they handling it, particularly in California we understand the company operates these fuel cells in California. We were just trying to get some thoughts before we made a final determination.

**Hdqtrs**. Anybody run across situations like this? Maybe not specifically to this example, but it's the whole manufacturing unit exemption and its scope and interpretation.

**Hdqtrs.** It seems counterintuitive or contradictory. I guess that's the word. They claim its not a solid waste because of the manufacturing process unit exemption but then they send it to a TSD.

Delaware. No, they are actually sending it to one of their facilities in Texas – not a TSDF.

Hdqtrs. OK, now I see.

Delaware. Yes, that's one of our issues.

**Hdqtrs**. I had shared with Delaware an email from California. I know someone from California is out there. Does anyone want to weigh in on this?

California. I think the email was from a colleague of mine. Right?

Hdqtrs. Yes it was.

**California**. We're pretty much follow EPA's interpretation on this. When removed from service and sent off-site, the exemption no longer applies.

Hdqtrs. That's what we have concluded too.

**Delaware**. That's what we have concluded. I just wanted to make sure there wasn't something else that I was missing before I made our determination.

**Hdqtrs**. I've seen a lot of reaching for this particular exemption. I have no experience with these desulfurization canisters in particular, but over the years, a lot of people have reached for this one.

**Hdqtrs**. I actually had one several months ago. Just like my colleague said, people are reaching in terms of I don't want to make the waste determination here, I'll push it back off or they want to take advantage of this exemption when its really beyond the scope of the exemption.

We've heard from California. Any other states out there who have run across issues with the manufacturing unit exemption at 40 CFR 261.4 (c)?

**Arizona**. Anybody consider looking at it a different way related to the oxygen breathing apparatus interpretation that EPA issued some years ago? I guess in '94.

Hdqtrs. Which said?

**Arizona**. As being a manufactured article that goes for recovery activity. So it would be exempt because of it being a manufactured article.

Connecticut. I thought that whole manufactured article thing has been superseded.

Arizona. Not to my knowledge. I haven't seen anything that has superseded it.

Delaware. I can look into that.

Hdqtrs. We might want to look at it too, just for backup purposes.

Hdqtrs. You said 1994 memo on oxygen canisters?

**Arizona**. It's RCRA Online No. 11835. And there's some other ones on there I'd have to research. We've had a similar things with oxygen generators and rocket motors and various other items out here in Arizona where they were going for some type of recovery and it depended on what they were doing it enjoyed some exemptions.

Region 5. Delaware, what makes these hazardous? Metals and VOCs?

Delaware. Its hazardous for arsenic, chromium, lead and benzene.

Connecticut. Just wanted to mention this manufactured article concept has come up before. At least within the context of mercury thermometers. I think its RCRA Online No. 13310. My recollection, at least for mercury thermometers that the concept for something that is manufactured article is not a solid or hazardous waste has been superseded but I can't point to where that precisely is but just for example, fluorescent lamps are a manufactured article as are used electronics and numerous other things that are regulated a HW. So I don't think that it is manufactured article going for reclamation is necessarily gets it out of RCRA.

**Hdqtrs.** Yes, manufactured articles is a term that appears in reference to 261.33 and saying that manufactured articles do not meet the definition of a commercial chemical product (CCP). So if you have a thermometer with mercury in it, it wouldn't meet the U151 listing for mercury but it could be hazardous because its TC for mercury.

Connecticut. By characteristic? Right?

**Hdqtrs**. Right. So a manufactured article, I think its just in relationship to 261.33 and whether you can carry a CCP listing under a P or U-list.

**Connecticut**. I was also going to mention that I would tend to agree that the manufactured process doesn't apply but you need to go beyond that and if you decide that's where you are at and decide where it does fall within 40 CFR 261.2.

Delaware. Right, and we've done that.

**Connecticut.** And in particular, would it best meet the definition of a spent material or possibly a byproduct. I don't think it would be a sludge because its not from air or water pollution control. And that's a big consideration because if it's a spent material, then it would be a solid and HW even if reclaimed (if the state had not picked up the 2008 DSW rule) whereas if it were a byproduct, it wouldn't be a solid and HW.

Delaware. Right now we are looking at it as a spent material.

Connecticut. Which I would also tend to agree.

**Delaware**. I struggle with the byproduct one. They are talking about a manufacturing process and I don't see the spent material as being a byproduct of any manufacturing. I'd have to think about it a little more.

**Connecticut**. One thing worth noting too is that I don't know if I can point to a place where its in writing, but the implication is that the secondary material categories in Table 1 in 261.2 are intended to cover basically all types of secondary materials and if a material doesn't fit neatly within say spent material, sludge or byproduct or a CCP or scrap metal, byproduct is basically the default category. But I think this neatly meets the definition of spent material based on what it is and what it does. Its similar to other types of expended materials, such as spent activated carbon.

Delaware. And that's basically what this is. Its activated carbon so it's a spent material.

Ohio. I'm not convinced this is spent material. The byproduct characterization still comes back around and that's because what's being processed here is natural gas which is just a CCP being purified. The concept of spent applies to the catalyst in this canister and not to the residue that's being collected. So that's why this whole process involves the generation of electricity. There is a process; it does not have to be a manufacturing process. So I don't think its outside of the realm of possibilities that this unit could be looked at as a production byproduct do to the material that's within the canister. And disregarding this concept of spent, especially since the material is not going to be reprocessed for continued use, such as in regeneration.

Delaware. Part of it goes to be reclaimed.

Ohio. For the metal content?

**Delaware**. I don't have a lot of detail on that. My understanding is that part of the catalyst in the sorbent material is recovered.

Hdqtrs. So that gets you back down to whether it's a byproduct or spent material because .....

Any other comments?

Tennessee. I would agree with Ohio. I would lean toward it being a byproduct.

Delaware. OK. I'll have to give that a thought.

Hdqtrs. So who's the tie breaker here? It's two and two.

California. It could be both. Could be a spent material with a byproduct.

**Region 1**. Isn't this process of what they are doing similar to carbon regeneration and we regulate carbon regeneration? The waste is extracted from the carbon and this is what it sounds like. They are extracting the sulfur in this process and don't we regulate carbon regeneration units?

Hdqtrs. We sure do.

Region 7. We do in waste water treatment.

**Region 1**. So regardless, I think it bypasses byproduct or spent material because it's a process that if you are recovering it or treating it to take the sulfur out, you are generating a material from another process that would be regulated. Its not being put back into a process.

**Pennsylvania**. We have 2 carbon permits for regeneration, kind of similar to... Byproducts, to me, would be an unexpected result of a manufacturing process, not a canister that is removing contaminants. That sounds to me as weighing on spent here.

Connecticut. I think the important thing here too is policy interpretation that Region 1 was referring to making the determination that carbon regeneration is regulated by RCRA as thermal treatment because there's a disposal element there. You are heating the carbon to strip off the contaminants and then you are incinerating them. So even though you are reclaiming the carbon inherent in that process is the destruction of the contaminants that were on the carbon. This kind of goes back to what's being reclaimed. If you are saying we're reclaiming the carbon by regenerating the carbon that may be through, but you are also destroying the contaminants on the carbon and that's not going to be subject to the reclamation exemption even if it is a byproduct.

**Ohio.** But that approach only applies if it is a spent or listed carbon. If it's a sludge or a byproduct by definition due to how it was generated that's not going to hold true and it wouldn't be regulated. A spent carbon was wastewater treatment is going to be a sludge; if its characteristic and not listed and its going for reclamation, its not a waste.

**Hdqtrs.** Well I think this is one of these topics that we could for another half hour and in the interest of time we'll stop. Delaware, are you scratching your head right now?

Delaware. This is fine. We have a little more research and we'll come to a conclusion.

Hdqtrs. Maybe you could let us know when its done.

Delaware. It will be done.



